Published in final edited form as:

J Hum Behav Soc Environ. 2013 ; 23(8): 967–971. doi:10.1080/10911359.2013.831295.

Health Promotion Project for University Students at a South African University: Results of a Pilot Survey

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Abstract

Globally, chronic diseases place a tremendous burden on health care systems all over the world. The increased prevalence of chronic diseases is mainly influenced by industrialization and decreased levels of physical activity. A cross-sectional qualitative and quantitative pilot survey, using a self-administered questionnaire and focus group discussions, was conducted with 73 students to assess the need for and feasibility of a health promotion program for university students at a rural South African university. The results of this survey suggest that there is a need for a health promotion program aimed at young adults who attend university.

Keywords

Southern Africa; university students; health promotion intervention

BACKGROUND

The World Health Organization (WHO) reports that of the 35 million people who died from chronic disease in 2010, half were under 70 years of age, and half were women (WHO, 2011). Chronic diseases, such as cardiovascular diseases, some cancers, chronic respiratory diseases, and diabetes, are the leading causes of mortality in the world. In general, chronic illnesses share a number of key features. Most of them have a long latency period, a

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prolonged course of illness with the unlikelihood of cure, non-contiguous origin, functional impairment or disability, and complex causality (McQueen, 2001).

Globally, chronic diseases place a tremendous burden on health care systems. The increased prevalence of chronic disease is mainly influenced by industrialization and globalization. These changes are associated with a change in food consumption and decreased levels of physical activity (WHO, 2011). Only 20% of these deaths occurred in high-income countries, while 80% occurred in low-income and middle-income countries (Beaglehole, Bonita, Horton, Adams, & McKee, 2004; Strong, Mathers, Leeder, & Beaglehole, 2005). The invisible epidemic is an under-appreciated result of poverty and hinders economic development in many countries. To control this epidemic of chronic diseases, every effort needs to be taken (WHO, 2010).

Recognizing the unique opportunity that exists to formulate and implement an effective strategy that substantially reduces noncommunicable diseases and subsequent deaths worldwide by improving healthy diet and promoting physical activity, the WHO (2010) has adopted the Global Strategy on Diet, Physical Activity and Health.

In 2000, South Africa's major cause of death was chronic diseases (37%), primarily cardiovascular diseases, HIV/AIDS (30%), followed by the pre-transitional causes for communicable diseases, maternal conditions, perinatal conditions and nutritional deficiencies (21%); and injuries (12%), revealing a quadruple burden of disease (Bradshaw et al., 2003). The 2010 South African Demographic and Health Survey reports that hypertension was the most commonly reported chronic condition (Department of Health, 2010; Steyn, Gaziano, Bradshaw, Laubscher, & Fourie, 2001); 29% of men and 56% of women were reportedly overweight or obese. About 57% of White men were either overweight or obese, whereas only 25% of Black men were either obese or overweight. However 57% of Black women were overweight or obese (Department of Health, 2010–2012).

Additionally in South Africa, the estimated burden of disease was ischemic heart disease (60.6%) and ischemic stroke (17.8% for males but 32.7% for females). Much of this figure is attributable to low fruit and vegetable consumption. Physical inactivity is leading to 30% of ischemic heart disease, 22% of ischemic stroke, 27% of colon cancer, 20% diabetes (type 2), and 17% of breast cancer (Joubert et al., 2007; Westaway, 2009).

Universities have a unique opportunity to influence young people's attitude and behavior toward healthy life styles and therefore reduce their own risk of noncommunicable diseases before they leave the university. They are the future leaders of any generation, are often seen as role models, and are in a position to lead by example if given the right tools. In this paper, we are presenting the results of a survey focusing on the health promotion outcome.

AIM

The aim was to pilot-test the survey of cultural appropriateness and language use. Second, we examined students' knowledge of the importance of fruit and vegetable consumption and daily physical activity and, third, whether there were differences by gender or nationality.

METHOD

Study Population

The participants were students at a rural Southern African university. They originate from different parts of South Africa as well as other countries. At the time of the survey (the 2008–2009 academic year), the student enrollment at the university was 8,548, distributed over three different campuses; about 57% of the students were female, and about 20% were non–South Africans. Students were recruited following wide publicity of the study, in lecture halls, classrooms, flyers in the library, the cafeteria, and other main meeting places for students. Prior to administration of the survey, each respondent signed a consent form, a survey agreement form, and a registration form.

Study Design

The study was a cross-sectional qualitative and quantitative survey using a self-administered paper-and-pencil questionnaire. The administration of the survey was followed by a focus group session to discuss the suitability of the questionnaire, use of language and cultural appropriateness, as well as the implementation of a health promotion program.

Ethical Approval

The institutional review board of the University of Pennsylvania, United States and the ethics committee of the collaborating University of Fort Hare, Alice, South Africa approved the study.

Description of the Questionnaire

Measures—The students completed an anonymous self-administered questionnaire. The questionnaire collected data on socioeconomic background, knowledge and attitude toward health promotion, and dietary and exercise habits. All data of attitude and behavior were measured using the Licker scales of one to five, agreeing and disagreeing, liking and disliking. The knowledge questions were answered in true or false terms.

Data Analysis—The survey data were collected with a paper-and-pencil questionnaire. In preparation for the analysis of the data, the double entry technique was used in data capturing to control for data entry discrepancies. The data analysis included chi squared, *t* tests, logistic regression, and multiple regressions. Descriptive statistics, including mean, standard deviations, and percentages, were calculated to characterize the sample in terms of sociodemographic characteristics and theoretical variables.

RESULTS

Nearly half of the participants (37) were female, and half were South Africans. The ages ranged between 18 to 30 years, with a mean age of 22.2 years. About 22.2% were in their first year, 33.3% were in their second year, and 26.4% in their third year at the university. Students came from different parts of South Africa and from other African countries like Namibia, Botswana, Zimbabwe, Lesotho, Swaziland, Congo, and Kenya.

Analyzing the students' attitude and behavior during the past 3-month period regarding diet, we found that an average of 18.6% students drank 100% fruit juice. About 29.3% regularly ate fresh fruit, only 3% ate salad, and about 29% regularly ate vegetables. Addressing physical activity in the past 3 months, the data indicated that about 39% of the students had worked out, and about 52.8% did push-ups.

Analyzing the data by gender and nationality showed that in regard to the consumption of 100% fruit juice, the non-South Africans seemed to be slightly higher than the South Africans. The same statistical trend appears with the consumption of fruit and vegetables. Both South Africans and non-South African groups seemed less likely to consume vegetables and salad. South Africans seem to eat more French fries than non-South Africans, as they seem to eat more potatoes.

Analyzing physical activities showed that nearly half of students do workout and this includes push-ups.

When analyzing the same data set by gender, we found that the females drink slightly more 100% fruit juice than the males. This trend follows for fruit consumption. For the consumption of salad, there were no differences: Participants hardly consumed salad. Female students ate slightly more vegetables than the male participants and far fewer French-fried potatoes. Analyzing data for physical activities showed that there were no significant differences by gender.

During the focus group discussion, the participants said that fruits and vegetables are too expensive and not easily available on campus and felt that they were not real food. They were not aware of the value and the protective health factors provided by these kinds of food; questioned about the value of physical activity, they argued that there would be no time for physical exercise. They joked that they would rather do "sexercise" than exercise. They argued that they needed to walk to class, which served as exercise. Conversation revealed that they did not know that physical exercise helps maintain health and prevents cardiovascular diseases.

The participants of the sessions admitted that they had poor knowledge about healthy diets, need for exercise, responsible alcohol consumption, and guidance about their behavior. The students showed keen interest in attending health promotion sessions.

In summary, analyzing the attitudes, behavior and intention toward fruit and vegetable consumption, and physical activity, the results showed there is a very little difference in regard to gender or nationality. There seems to be an alarming lack of knowledge and understanding in regard to the value of a healthy diet and physical activity. The results of this survey demonstrate the urgency for a program for university students, focusing on health promotion addressing a healthy life style.

DISCUSSION

Fresh fruit and vegetables are important components of a healthy diet, and their sufficient daily consumption helps prevent major diseases, such as cardiovascular diseases and certain

cancers. Overall, it is estimated that up to 2.7 million lives could potentially be saved each year if fruit and vegetable consumption were sufficiently increased. Moreover, it is estimated that an overall 1.9 million deaths are attributable to physical inactivity (WHO, 2010; Westaway, 2009).

Healthy diet and regular, adequate physical activities are major factors in the promotion and maintenance of good health throughout one's entire life. Unhealthy diets and physical inactivity are two of the main risk factors of raised blood pressure, high blood glucose, abnormal blood lipids, overweight/obesity, and of the major chronic diseases such as cardiovascular diseases, cancer, and diabetes (Westaway 2009).

Wengreen and Moncur (2009) found in their study that some students going into college from high school experience a significant amount of weight gain due to a change of diet and physical inactivity. They suggest offering these students interventions that focus on diet and exercise; these could be offered during the orientation time of the first year at university (Wengreen & Moncur). Venues for such targeted education may include residence halls and point-of-purchase education in dining facilities. Institutions like universities, technicons, or colleges could be using the unique opportunity to prepare young adults for their role as future leaders in several ways (St. Leger, 2004).

These results of the pilot survey suggest that a health promotion program aimed at improving the quality of life combined with improved health knowledge and practice for university students may be necessary. The overall goal of such an intervention should be to promote and protect health through healthy eating and physical activity. This would increase awareness and understanding of the influences of diet and physical activity on health and reduce risk factors for chronic diseases that stem from unhealthy diets and lack of physical inactivity.

Universities need to step up their responsibilities. First, they need to include in the mandated curriculum instruction regarding physical activity (including coaching about life time activities such as weight training and various physical activities such as dance, tennis, hand ball, golf, rock climbing, swimming, etc.) as well as a health class that provides the most recent data regarding exercise and diet (these may be single credit courses taken during the first years at university). Second, they need to ensure that their food venues provide adequate healthy choices (students should have ample access to fresh fruit and vegetables) perhaps even listing nutritional values on charts posted in cafeterias. Third, universities should provide gymnasiums where physical activity may be conducted. It would be helpful for students to have access to physical training and life skills activities. While at first blush these may seem to be frills, as the survey indicates, there is a huge disconnect between knowledge and practice. Students need to experience, first-hand, the benefits of a healthy diet and physical activities so that they may be enjoyed far into the future.

Limitations of this survey are the small sample size and the use of paper-and-pencil survey, which might have led to more socially desirable answers. Some questions were not changed to the social economic background of the students.

Acknowledgments

The authors wish to thank Raymond Chiruka and Andrew Gwaze for the recruitment of the participants and assisting with the administration of the study. We thank all participants for their time and effort. We also thank all team members of all departments involved in the development of the survey and conduct of the study. This study was made possible through grant award R34MH078803 from the National Institute of Mental Health.

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